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## Contribution to the knowledge of the Gerridae, Coreoidea, Piesmatidae, Saldidae, Corixoidea, Nepoidea and Notonectidae (Hemiptera, Heteroptera) fauna of Turkey

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**A b s t r a c t :** This study is based upon material of families Gerridae, Alydidae, Coreidae, Rhopalidae, Stenocephalidae, Piesmatidae, Saldidae, Corixidae, Belostomatidae, Nepidae and Notonectidae collected from different localities of Turkey between 1978 and 2012. In this study, 4 species of 2 genera from Gerridae, 3 species of 2 genera from Alydidae, 14 species of 11 genera from Coreidae, 15 species of 8 genera from Rhopalidae, 2 species of 1 genus from Stenocephalidae, 3 species of 2 genera from Piesmatidae, 3 species of 1 genus from Saldidae, 5 species of 2 genera from Corixidae, 1 species of 1 genus from Belostomatidae, 1 species of 1 genus from Nepidae and 3 species of 1 genus from Notonectidae were recorded. In total, 54 species from 32 genera of these families were recorded from Turkey. Among them, *Camptopus lateralis* (GERMAR 1817) (Alydidae), *Coreus marginatus* (LINNAEUS 1758) (Coreidae), *Corizus hyoscyami* (LINNAEUS 1758), *Stictopleurus punctatonevrosus* (GOEZE 1778) (Rhopalidae), *Dicranocephalus agilis* (SCOPOLI 1763) (Stenocephalidae) and *Piesma maculatum* (LAPORTE, 1833) (Piesmatidae) have been found the most abundant and widespread species. New localities are added for some species previously reported for Turkey.

**K e y w o r d s :** Hemiptera, Heteroptera, Gerridae, Alydidae, Coreidae, Rhopalidae, Stenocephalidae, Piesmatidae, Saldidae, Corixidae, Belostomatidae, Nepidae, Notonectidae, Fauna, new records, Turkey.

### Introduction

Gerridae are well known bugs as pound skaters or water striders. These Gerromorpha "walk", "run" or skate upon fresh water and some (Halobatidae) on seas and oceans of warm regions (ANDERSEN 1982) thanks to hydrophobic comb or fan of setae on intermediate and hind tarsi. They vary from 1.5 to more than 35 mm in length. The body is elongate or more or less globular and generally dull (blackish to brownish). The mid and hind legs are thin and long, the fore – raptorial. Gerridae are predators or necrophagous. They live on calm waters or streams as well. Micropteran and apteran forms are not rare among the populations. Male genitalia are symmetric, female ones are lacinate or platelike (ANDERSEN 1982). Worldwide are recognized eight subfamilies, about 60 genera and more than 500 species (SCHUH & SLATER 1995).

Coreoidea (or leaf-footed, squash or pod bugs) includes families Coreidae, Rhopalidae,

and Alydidae. Family Stenocephalidae is often attached to this superfamily (SCHAEFER 1965; MOULET 1995; AUKEMA & RIEGER 2006; YANG et al. 2012). Coreoidea represent a group of phytophagous Pentatomomorpha but some of them occasionally are necrophagous, coprophagous or oophagous (SCHUH & SLATER 1995; MOULET 1995; MITCHELL 2000; YILDIRIM et al. 2011). They sometimes cause significant loss of grain, crops, fruits or nuts. The group is cosmopolitan and in the Palaearctics is represented by more than 100 genera and nearly 500 species. LETHIERRY & SÉVERIN (1894) and PUTON (1875) catalogued world and European Coreidae respectively. However, these works are out of date; STICHEL (1957-59) listed Palaearctic fauna.

Piesmatidae or ash-grey leaf bugs are a small group of Geocorisae which comprises only 2 genera and 14 species in the Palaearctics. They resemble Tingidae but are closer to Lygaeoidea. Their biology is scarcely known (YILDIRIM & ÖZBEK 1990). The West Palaearctic fauna is revised by HEISS & PÉRICART (2007).

Saldidae or shore bugs are 2 to 8 mm long bugs which live on shores of rivers (ripicolous). These predators constitute a rather small group of 11 genera and 38 species in Europe and the Mediterranean basin (PÉRICART 1990). Being in general dark or dark brown, the species are difficult to separate and the identification often requires dissection of genitalia. The West European fauna is revised by PÉRICART (1990) and the world fauna is studied by COBBEN.

Corixoidae or water boatmen are minute aquatic bugs which generally live in massin rivers, ponds or lakes where they feed upon vegetation or as predators. Both alate and apterous forms could be found in one and the same species. Corixids stridulate particularly in the search of opposite sex. There are 15 genera and about 160 species in the Palaearctics (AUKEMA & RIEGER 1995). The European fauna is revised by JANSSON (1986).

Nepoidea or water scorpions are generally large in size species (up to 70 mm in length in some Belostomatidae). These predators live in lentic habitats or in calm parts of streams, sometimes in the silt or the mud at the bottom. In the Palaearctic Region there are 8 genera and 35 species only.

Notonectoidea are well known backswimmers, a rather compact small group of medium sized bugs (around 12-15 mm long) of 5 genera and 55 species in the Palaearctics. These predators live in the vegetation in all types of water particularly calm waters.

The aim of this paper is to bring new collect and biological data on Gerridae, Alydidae, Coreidae, Rhopalidae, Stenocephalidae, Piesmatidae, Saldidae, Corixidae, Belostomatidae, Nepidae and Notonectidae in Turkey. In this study, 4 species of 2 genera from Gerridae, 3 species of 2 genera from Alydidae, 14 species of 11 genera from Coreidae, 15 species of 8 genera from Rhopalidae, 2 species of 1 genus from Stenocephalidae, 3 species of 2 genera from Piesmatidae, 3 species of 1 genus from Saldidae, 5 species of 2 genera from Corixidae, 1 species of 1 genus from Belostomatidae, 1 species of 1 genus from Nepidae and 3 species of 1 genus from Notonectidae were recorded. In total, 54 species from 32 genera of these families were recorded from Turkey.

## Materials and Methods

The material of the Gerridae, Alydidae, Coreidae, Rhopalidae, Stenocephalidae, Piesmatidae, Saldidae, Corixidae, Belostomatidae, Nepidae and Notonectidae was collected from different localities of Turkey from 1978 to 2012. Provinces of the collected specimens are given in alphabetical order in the list. The material is deposited in the Entomology Museum, Erzurum, Turkey (EMET).

## Results

In this study, 4 species of 2 genera from Gerridae, 3 species of 2 genera from Alydidae, 14 species of 11 genera from Coreidae, 15 species of 8 genera from Rhopalidae, 2 species of 1 genus from Stenocephalidae, 3 species of 2 genera from Piesmatidae, 3 species of 1 genus from Saldidae, 5 species of 2 genera from Corixidae, 1 species of 1 genus from Belostomatidae, 1 species of 1 genus from Nepidae and 3 species of 1 genus from Notonectidae were recorded. In total, 54 species from 32 genera of these families were recorded from Turkey.

### Infraorder G e r r o m o r p h a

### Superfamily G e r r o i d e a

### Family G e r r i d a e

### Subfamily G e r r i n a e

### Tribe G e r r i n i

#### *Aquarius paludum* (FABRICIUS 1794)

Material examined: Konya: Beyşehir, Gökçimen, 21.VII.1997, 2♂♂, 26.VII.1997, 2♂♂; Osmaniye: 17.VII.1997, 2♀♀, 15.VIII.1998, ♂.

#### *Aquarius ventralis* (FIEBER 1860)

Material examined: Antalya: 7.VII.1984, ♂, 6.IX.1995, 3♂♂; Elazığ: 1067 m, 2.VIII.1995, ♂; Erzurum: 1.VI.1983, ♂; Osmaniye: 15.VII.1997, 2♂♂, 2.VIII.1992, 4♂♂; Rize: 2.VIII.1992, ♂; Trabzon: 8.VIII.1998, 4♀♀, 20♂♂.

#### *Gerris (Gerris) argentatus* SCHUMMEL 1832

Material examined: Erzurum: 1.VI.1983, 3♀♀, 5♂♂, Pasinler, 10.VI.1983, ♂; Kütahya: 22.VII.1983, ♂; Muğla: 2.VIII.1983, ♀.

#### *Gerris (Gerriselloides) lateralis* SCHUMMEL 1832

Material examined: Adana: Havuzlubahçe, 23 m, 21.VIII.2012, 2♂♂; Çankırı: Eskipazar, 31.VIII.1984, ♂; Denizli: Çameli, 15.IX.1984, ♀; Erzurum: Aziziye, Rizekent, 30.VII.1998, ♀, Pasinler, 25.VII.1983, ♂, Şenkaya, Ormanlı, 20.V.1994, 2♀♀, ♂, Turnalı, 1461 m, 31.VII.2010, ♂; Gümüşhane: 28.VIII.1992, ♂; Konya: Derebucak, 10.VII.1986, ♂; Kütahya: 22.VII.1983, ♂; Osmaniye: 15.VIII.1998, 2♂♂.

**Infraorder P e n t a t o m o m o r p h a****Superfamily C o r e o i d e a****Family A l y d i d a e****Subfamily A l y d i n a e*****Alydus calcaratus* (LINNAEUS 1758)**

**Material examined:** Bayburt: Kopdağı, 2380 m, 5.IX.2012, ♂; Erzurum: Aşkale, Kopdağı, 1430 m, 4.IX.2012, ♂, Çat, 1913 m, 23.VII.2011, ♂, Horasan, Çayırözü, 1794 m, 21.VIII.2011, ♀, ♂, Hacıahmet, 1823 m, 17.VIII.2012, ♂, Muratbağı, 1859 m, 21.VIII.2011, ♀, Narman, Samikale, 1541 m, 30.VII.2011, ♂, Oltu, Sarısaz, 1300 m, 30.VIII.2012, ♀, Pasinler, Acı, 1905 m, 22.VII.2012, ♂, Pazaryolu, 1430 m, 4.VIII.2012, 3♀♀, 2♂♂, Tortum, 1650 m, 3.IX.2011, ♀.

***Camptopus lateralis* (GERMAR 1817)**

**Material examined:** Ankara: Kızılcahamam, Sipahiler, 975 m, 14.VIII.2011, ♀; Antalya: Aksu, 15 m, 1.VII.2012, ♂, 2.VII.2012, ♀, Kepez, Odabaşı, 305 m, 29.VII.2012, 2♀♀; Ardahan: Posof, Baykent, 1804 m, 25.VIII.2012, ♂; Bingöl: Ekinyolu, 24.IX.2012, 2♀♀; Erzincan: 850 m, 15.VIII.2012, 3♀♀, Kemah, 5.VIII.2011, ♀; Erzurum: Aşkale, Demirkıran, 1699 m, 11.VIII.2012, 2♀♀, 1712 m, 12.VIII.2012, ♀, Aziziye, Çatak, 2119 m, 28.VIII.2012, ♀, Çat, 1913 m, 23.VII.2011, ♀, Horasan, Aşağı Çamlıkale, 2242 m, 13.VIII.2012, ♀, Değirmenli, 1643 m, 13.VIII.2011, ♀, Muratbağı, 1859 m, 21.VIII.2011, ♂, İspir, Kirazlı, 1207 m, 24.VII.2011, ♂, Madenköprübaşı, 1245 m, 4.VIII.2012, ♀, ♂, Öztoprak, 1724 m, 15.VII.2012, ♂, Yukarı Özbağ, 1190 m, 20.VII.2011, ♀, ♂, Köprüköy, Marifet, 1685 m, 16.VI.2012, 3♀♀, Narman, Mahmutçavuş, 1560 m, 16.VII.2012, ♀, 1546 m, 13.VIII.2012, ♀, Kemişözü, 1835 m, 23.VI.2011, 2♂♂, Kilimli, 1716 m, 13.VIII.2012, ♀, ♂, Samikale, 1541 m, 30.VII.2011, ♀, Şehitler, 1850 m, 8.VI.2012, 3♂♂, Oltu, 1455 m, 10.VI.2012, ♀, 2♂♂, Çamlıbel, 1658 m, 30.VI.2012, ♂, Güzelsu, 1221 m, 30.VI.2012, ♀, İğdeli, 1660 m, 30.VI.2012, 2♀♀, 2♂♂, İnancı, 1812 m, 31.VII.2011, ♀, Sarısaz, 1388 m, 5.VIII.2012, 2♂♂, 1421 m, 30.VIII.2012, 2♀♀, ♂, Toklu, 1300 m, 10.VI.2012, ♀, 3♂♂, Tutmaç, 1720 m, 16.VII.2012, ♂, Yolboyu, 1135 m, 10.VI.2012, 2♀♀, 2♂♂, Olur, 1225 m, 10.VI.2012, ♀, 3♂♂, Aşağı Karacasu, 1324 m, 19.VII.2012, 2♂♂, Boğazgören, 1155 m, 23.VI.2011, ♀, 1168 m, 19.VII.2012, ♀, Coşkunlar, 1054 m, 10.VI.2012, ♀, 999 m, 19.VII.2012, ♂, Kaban, 1215 m, 19.VII.2012, ♀, ♂, Kaledibi, 1040 m, 23.VI.2011, ♀, ♂, Köprübaşı, 994 m, 19.VII.2012, ♀, 2♂♂, 973 m, 30.VII.2012, ♀, ♂, Olurdere, 1050 m, 10.VI.2012, 2♀♀, Ormanağzı, 951 m, 6.VII.2012, ♂, 955 m, 10.VII.2011, 2♀♀, 960 m, 5.VIII.2012, 4♂♂, Taşlıköy, 885 m, 6.VII.2012, ♀, Yeşilbağlar, 987 m, 10.VII.2011, ♂, ♀, Yukarı Karacasu, 1521 m, 19.VII.2012, ♂, Pasinler, Büyükdere, 1759 m, 12.VIII.2012, ♀, Pazaryolu, 1430 m, 4.VIII.2012, 5♀♀, ♂, Gülçimen, 1562 m, 15.VII.2012, ♀, 1663 m, 20.VII.2011, ♀, Kumaşkaya, 1800 m, 23.VII.2011, ♂, Kümbettepe, 1366 m, 24.VI.2012, 2♂♂, Şenkaya, Çatalelma, 1583 m, 14.VII.2012, ♀, Deliktaş, 1219 m, 13.VII.2011, ♀, Gözebaşı, 1794 m, 14.VII.2012, ♀, ♂, Hoş, 1193 m, 10.VI.2012, ♂, Paşalı, 1586 m, 10.VI.2012, ♀, ♂, Penek, 1145 m, 10.VI.2012, ♀, Taht, 1283 m, 10.VI.2012, ♀, ♂, Timurkışla, 1314 m, 14.VII.2012, 2♀♀, Tortum, 1660 m, 31.VII.2011, ♀, Aksukapı, 1648 m, 2.VII.2012, ♂, 07.VII.2011, ♀, Aşağı Sivri, 1546 m, 16.VII.2012, ♂, Bağbaşı, 1191 m, 14.VIII.2012, ♀, ♂, Derekapı, 1247 m, 13.VII.2011, ♀, ♂, Pehlivanlı, 1158 m, 21.VII.2012, ♀, 1179 m, 14.VIII.2012, ♂, Suyatağı, 1236 m, 21.VII.2012, ♀, Şenyurt, 1265 m, 21.VII.2012, 2♀♀, ♂, Yukarı Sivri, 1500 m, 8.VI.2012, ♀, 2♂♂, 1909 m, 16.VII.2012, ♀, Uzundere, 1053 m, 16.VII.2011, ♀, 1052 m, 21.VII.2012, 2♂♂, Altınçanak, 1132 m, 21.VII.2012, 2♀♀, ♂, Çağlayanlı, 967 m, 27.V.2011, 2♀♀, 970 m, 27.V.2011, ♂, 2♂♂, 1010 m, 7.VI.2012, 2♀♀, ♂, Dikyar, 1133 m, 14.VIII.2012, 2♀♀, ♂, Gölbaşı, 1150 m, 14.VIII.2012, ♀, 2♂♂, Sapaca, 1082 m, 21.VII.2012, 3♂♂, Şelale, 985 m, 27.V.2011, ♂, 1012 m, 27.V.2011, 2♀♀; Isparta: Ayazmana, 1100, 06.VIII.2011, ♀; Mersin: Erdemli, Üçtepe, 120 m, 10.VIII.2012, ♀, 2♂♂; Tunceli: Pülümür, Dereköy, 1431 m, 9.VIII.2011, ♂, Sağlamtaş, 1701 m, 13.VIII.2011, ♀, Sarıgül, 1900 m, 8.VII.2011, ♂.

***Camptopus tragacanthae* (KOLENATI 1845)**

**Material examined:** Erzurum: Horasan, Dönertaş, 1907 m, 13.VIII.2012, ♀, Olur, Coşkunlar, 1054 m, 10.VI.2012, ♂, Tortum, Yukarı Sivri, 1909 m, 16.VII.2012, ♂, Uzundere, Çağlayanlı, 1010 m, 7.VI.2012, ♀; Tunceli: Pülümür, Sağlamtaş, 1701 m, 13.VIII.2011, ♀.

**Family C o r e i d a e****Subfamily C o r e i n a e****Tribe A n i s o s c e l i n i*****Leptoglossus occidentalis* HEIDEMANN1910**

**Material examined:** Ankara: Atatürk Orman Çiftliği, 938 m, 29.VI.2011, 2♀♀, Kızılcahamam, Sipahiler, 975 m, 27.VI.2011, ♀; İstanbul: Zeytinburnu, 3 m, 11.VIII.2011, ♀.

**Tribe C o r e i n i*****Centrocoris spiniger* (FABRICIUS 1781)**

**Material examined:** Antalya: Kepez, Odabaşı, 305 m, 29.VII.2012, ♂; Balıkesir: Çoban Çeşmesi, 200 m, 16.VII.2011, 2♀♀; Erzurum: Tortum, Çamlıca, 1674 m, 16.VII.2012, 3♀♀, ♂, Uzundere, Altınçanak, 1132 m, 21.VII.2012, ♀; Mersin: Erdemli, Esenpınar, 850 m, 2.IX.2011, ♀; Sanlıurfa: Bozova, Yaylak, 435 m, 30.VII.2012, ♀; Tunceli: Ovacık, Gözelen, 1352 m, 3.VIII.2012, ♀.

***Centrocoris variegatus* KOLENATI1845**

**Material examined:** Adana: University field, 20.VII.2011, ♀; Ankara: Kızılcahamam, Sipahiler, 957 m, 16.VII.2011, ♀, ♂; Antalya: Kepez, 112 m, 21.VI.2012, 2♀♀, Odabaşı, 305 m, 29.VII.2012, ♀, Serik, Kayaburnu, 36 m, 29.VII.2012, ♂; Burdur: 1025 m, 25.VII.2012, ♂; Erzurum: Köprüköy, Eyüpler, 26.VI.2011, ♂, Olur, Ormanağzı, 955 m, 10.VII.2011, ♂, Şenkaya, İçmesu, 1656 m, 14.VIII.2012, ♂, Uzundere, Çağlayanlı, 1010 m, 7.VI.2012, 3♀♀; Manisa: Salihli, Kabazlı, 20.VII.2011, ♀.

***Coreus marginatus* (LINNEAUS 1758)**

**Material examined:** Adana: Tufanbeyli, Polatpınar, 21.VI.2011, 4♀♀, ♂; Ankara: Kızılcahamam, Işık Mountain, 650 m, 18.IX.2011, ♀; Antalya: Kepez, Odabaşı, 305 m, 25.VII.2012, ♂, Serik, Kocayatak, 10 m, 30.VII.2012, ♀; Ardahan: Posof, Baykent, 25.VIII.2012, ♂; Bingöl: Ekinyolu, 7.VII.2012, 2♀♀; Burdur: 1025 m, 21.VI.2012, ♂, 22.VI.2012, ♂; Bursa: Karacabey, Çiftlikler, 8.VIII.2011, ♀; Erzurum: Akyazı, 1.VIII.2011, ♀, Aşkale, Athikonak, 1757 m, 5.VII.2012, ♂, Kopdağı, 2380 m, 5.IX.2012, ♂, Tazegül, 1773 m, 19.VI.2012, ♂, Yeniköy, 1905 m, 19.VI.2012, ♀, 1935 m, 5.VII.2012, ♂, Çat, Aşağı Çat, 2089 m, 16.VII.2012, ♀, Güzelyurt, 2117 m, 9.VII.2011, ♂, Kom, 2206 m, 5.VII.2012, ♀, Horasan, Çayırözü, 1794 m, 25.VIII.2011, ♂, Dönertaş, 1907 m, 13.VIII.2012, 2♀♀, Hacıahmet, 1823 m, 13.VIII.2012, ♀, Muratbağı, 1852 m, 22.VI.2012, ♀, ♂, 1859 m, 21.VIII.2011, 3♀♀, İspir, Akseki, 2190 m, 20.VII.2011, ♂, Çayırözü, 1947 m, 4.VIII.2012, 3♂♂, Kirazlı, 1580 m, 6.VII.2012, ♀, 1206 m, 20.VII.2011, ♂, Karayazı, Çatalören, 2313 m, 17.VI.2012, ♂, Köprüköy, Ilıcasu, 2111 m, 30.VII.2011, ♀, Marifet, 1685 m, 26.VI.2011, ♀, Narman, Göllü, 1842 m, 30.VI.2012, ♀, Şehitler, 1884 m, 16.VII.2012, ♀, 2♂♂, Oltu, Güzelsu, 1221 m, 30.VI.2012, ♀, Orcuk, 1556 m, 10.VI.2012, ♀, Sarsaz, 1388 m, 5.VIII.2012, ♂, Tutmaç, 1719 m, 16.VII.2012, ♀, Olur, Coşkunlar, 1054 m, 10.VI.2012, ♂, Kaban, 1215 m, 19.VII.2012, ♀, Yukarı Karacasu, 1521 m, 19.VII.2012, ♀, Pasinler, Ovaköy,

1785 m, 12.VIII.2012, ♂, Şenkaya, Penek, 1145 m, 10.VII.2011, ♂, Tekman, Güzeldere, 1948 m, 16.VII.2011, ♀, 2♂♂, Tekman, Güzeldere, 1948 m, 16.VII.2012, ♀, Tortum, Arılı, 1650 m, 30.VIII.2012, ♀, Aşağı Sivri, 1546 m, 16.VII.2012, ♀, Taşbaşı, 1816 m, 09.VII.2011, ♂, Uzundere, 1053 m, 16.VII.2011, ♀, Çağlayanlı, 1010 m, 7.VI.2012, ♂, Çamlıyamaç, 1290 m, 07.VIII.2011, 2♀♀, Kirazlı, 1231 m, 21.VII.2012, ♀, Şelale, 1012 m, 26.V.2012, 2♀♀; İstanbul: Beykoz, 70 m, 15.VII.2011, ♀, ♂; İzmir: Bornova, 2 m, 20.VII.2012, ♂; Kars: Susuz, 1680 m, 25.VII.2011, ♀; Samsun: Havza, Kamlık, 500 m, 8.IX.2011, 2♀♀, ♂, 10.IX.2011, 2♂♂, 14.IX.2011, 2♀♀, 2♂♂.

### ***Enoplops disciger* (KOLENATI 1845)**

Material examined: Erzurum: Horasan, Dönertaş, 1907 m, 13.VIII.2012, ♂, Pasinler, Yiğitpinarı, 1815 m, 22.VII.2012, ♂.

### ***Gonocerus acuteangulatus* (GOEZE 1778)**

Material examined: Erzurum: Uzundere, Çağlayanlı, 1010 m, 7.VI.2012, ♀.

### ***Spathocera lobata* (HERRICH-SCHÄFFER 1840)**

Material examined: Erzurum: Aşkale, Kavurmaçukur, 2233 m, 5.VII.2012, ♂, Narman, Yanıktaş, 1612 m, 30.VI.2012, ♀.

### ***Syromastus rhombeus* (LINNÉ 1767)**

Material examined: Burdur: 1025 m, 20.VII.2012, ♂; Erzurum: Palandöken, 2155 m, 22.VII.2012, ♀, Horasan, Hacı Ahmet, 1823 m, 17.VIII.2012, ♀, Muratbağı, 1859 m, 21.VIII.2011, ♀, Şenkaya, Hoş, 1193 m, 10.VI.2012, ♂; İstanbul: Bayrampaşa, 77 m, 10.VII.2012, ♂.

## **Subfamily Pseudophloeinae**

### **Tribe Pseudophloeini**

### ***Arenocoris waltlii* (HERRICH-SCHÄFFER 1834)**

Material examined: Erzurum: Aziziye, Alaca, 1751 m, 5.VII.2012, ♀, ♂.

### ***Bathysolen nubilus* (FALLÉN 1807)**

Material examined: Mersin: Erdemli, Kocahasanlı, 13.VII.2012, ♀.

### ***Ceraleptus gracilicornis* (HERRICH-SCHÄFFER 1835)**

Material examined: Erzincan: Üzümlü, 1518 m, 10.VI.2010, ♀; Erzurum: Narman, Ünlükaya, 1700 m, 8.VI.2012, ♀, Oltu, Yayla, 2005 m, 10.VI.2012, ♀, Pazaryolu, 1445 m, 20.VII.2011, ♀, Uzundere, Çağlayanlı, 967 m, 27.V.2011, ♂.

### ***Coriomeris affinis* (HERRICH-SCHÄFFER 1839)**

Material examined: Erzurum: Palandöken, 2155 m, 22.VII.2012, ♂, University field, 1880 m, 22.VII.2011, ♂, 21.IX.2012, ♂, Aşkale, Çatören, 1814 m, 11.VIII.2012, ♀, Aziziye, Eskipolat, 1847 m, 24.VI.2012, ♂, Çat, Değirmenli, 1955 m, 11.VIII.2012, ♂, Güzelyurt, 2117 m, 9.VIII.2011, ♂, Yaylasuyu, 2203 m, 5.VII.2012, ♂, Horasan, Kırkgöze, 1864 m, 7.VI.2012, ♂, Muratbağı, 1852 m, 22.VI.2012, ♀, Karayazı, Alemdağı, 2022 m, 16.VI.2012, ♂, Çatalören, 2113 m, 16.VI.2012, 2♂♂, Köprüköy, Geyikli, 2144 m, 17.VII.2012, ♂, Narman, Beyler, 1710 m, 8.VI.2012, ♂, Kilimli, 1716 m, 13.VIII.2012, ♂, Ünlükaya, 1700 m, 8.VI.2012, ♂, Oltu, Özdere,

1822 m, 6.VII.2012, ♂, Yarbaşı, 1784 m, 6.VII.2012, ♀, Olur, 1225 m, 10.VI.2012, ♂, Süngübayır, 1650 m, 10.VI.2012, ♂, Şenkaya, Gözebaşı, 1794 m, 14.VII.2012, ♂, Hoş, 1193 m, 10.VI.2012, ♀, ♂, İçmesu, 1656 m, 14.VII.2012, ♂, Taht, 1283 m, 10.VI.2012, ♂, Tekman, Kili Mezra, 1940 m, 16.VI.2012, ♀, Tortum, Aşağı Sivri, 1546 m, 16.VII.2012, ♂, Derekapı, 1010 m, 7.VI.2012, ♂, Yukarı Sivri, 1500 m, 8.VI.2012, ♂, Uzundere, Çağlayanlı, 1010 m, 7.VI.2012, ♂.

### ***Coriomeris denticulatus* (SCOPOLI 1763)**

**Material examined:** Erzurum: Palandöken, 2155 m, 22.VII.2012, ♂, Aşkale, 1661 m, 19.VI.2012, ♂, İspir, Yeşilvadi, 2285 m, 24.VI.2012, ♂, Olur, 1225 m, 10.VI.2012, ♂, Süngübayır, 1650 m, 10.VI.2012, ♂, Şenkaya, Gözebaşı, 1794 m, 14.VII.2012, ♂, Paşalı, 1586 m, 10.VI.2012, ♂, Tortum, Şenyurt, 1265 m, 21.VII.2012, ♂.

### ***Coriomeris hirticornis* (FABRICIUS 1794)**

**Material examined:** Erzurum: Narman, Kilimli, 1716 m, 13.VIII.2012, ♂, Oltu, Toklu, 1300 m, 10.VI.2012, ♂, Yolboyu, 1135 m, 10.VI.2012, ♀, Şenkaya, Paşalı, 1586 m, 10.VI.2012, ♀, Timurkışla, 1317 m, 14.VII.2012, 2♂♂, Uzundere, Şelale, 1012 m, 27.V.2011, ♂.

## **Family R h o p a l i d a e**

### **Subfamily R h o p a l i n a e**

### **Tribe C h o r o s o m a t i n i**

### ***Chorosoma schillingii* (SCHILLING 1829)**

**Material examined:** Erzincan: 850 m, 15.VIII.2012, ♂; Erzurum: Şenkaya, Hoş, 1193 m, 31.VII.2011, 3♀♀, 2♂♂.

### **Tribe C o r i z o m o r p h a t i n i**

### ***Corizomorpha janowskyi* JAKOVLEV 1883**

**Material examined:** Erzurum: Köprüköy, Ataköy, 1788 m, 17.VI.2012, ♀.

### **Tribe R h o p a l i n i**

### ***Brachycarenum tigrinus* (SCHILLING 1829)**

**Material examined:** Erzurum: Dadaşköy, 1806 m, 4.VIII.2011, ♀, Karagöbek, 2033 m, 7.VI.2012, ♀, University field, 1880 m, 22.VII.2011, ♀, Aşkale, Gökçebük, 1699 m, 23.VII.2011, ♂, Aziziye, Başçakmak, 1860 m, 20.VII.2011, ♀, Özbek, 1930 m, 5.VIII.2011, ♀, Hınıs, Akören, 1828 m, 16.VII.2011, ♂, Horasan, Çayırözü, 1794 m, 21.VIII.2011, 2♀♀, Kızılarkale, 1953 m, 22.VI.2012, ♀, ♂, Muratbağı, 1859 m, 21.VIII.2011, ♀, İspir, 1236 m, 22.VI.2011, ♂, Elmalı, 1328 m, 20.VII.2011, ♂, Karaçoban, Maruf, 1550 m, 26.VI.2011, ♂, Köprüköy, Ataköy, 1788 m, 26.VI.2011, ♀, Ilcasu, 2111 m, 30.VII.2011, ♀, Marifet, 1685 m, 16.VI.2012, ♀, Örentaş, 2106 m, 30.VI.2012, ♀, Tepeköy, 1873 m, 05.VIII.2011, ♀, Narman, Araköy, 1472 m, 23.VI.2011, ♀, Beyler, 1710 m, 8.VI.2012, 2♂♂, Kışlaköy, 1892 m, 13.VIII.2012, ♂, ♂, Samikale, 1541 m, 30.VII.2011, ♀, ♂, Ünlükaya, 1700 m, 8.VI.2012, ♀, 2♂♂, Oltu, Demirtaş, 1888 m, 6.VII.2012, ♂, Yarbaşı, 1784 m, 6.VII.2012, ♀, Yayla, 2005 m, 6.VII.2012, ♀, Olur, Süngübayır, 1650 m, 10.VI.2012, ♀, Pasinler, Büyükdere, 1759 m, 12.VIII.2012, ♀, Büyüktüy, 1819 m, 30.VII.2011,



♂, Şenkaya, Hoş, 1193 m, 10.VI.2012, ♂, İkizpınar, 1589 m, 31.VII.2011, ♀, Paşalı, 1586 m, 10.VI.2012, ♀, Taht, 1283 m, 10.VI.2012, ♂, Timurkışla, 1314 m, 14.VII.2012, ♂, Tortum, Aktaş, 1765 m, 31.VII.2011, ♂, Derekapı, 1247 m, 9.VII.2011, ♀, Uzundere, Çağlayanlı, 967 m, 27.V.2011, ♀, 1010 m, 7.VI.2012, ♂.

### *Corizus hyoscyami* (LINNAEUS 1758)

**Material examined:** **Antalya:** Kepez, Odabaşı, 305 m, 7.VIII.2012, ♂; **Ardahan:** Çamlıçatak, 24.VIII.2012, ♂, Çeğilli, 1834 m, 11.VIII.2012, ♂; **Balıkesir:** Çoban Çeşmesi, 200 m, 17.VII.2011, ♀; **Burdur:** 1025 m, 25.VII.2012, ♂; **Erzincan:** 850 m, 15.VIII.2012, ♀; **Erzurum:** Dadaşkøy, 1806 m, 4.VIII.2011, 2♂♂, Karagöbek, 2033 m, 7.VI.2012, ♂, Üniöersity field, 1890 m, 23.VIII.2011, ♂, 21.IX.2012, ♂, Yağmurcuk, 2010 m, 9.VIII.2011, ♂, Aşkale, 1661 m, 19.VI.2012, ♀, Çayköy, 1580 m, 27.VII.2012, ♂, Demirkıran, 1699 m, 11.VIII.2012, ♀, Gökçebük, 1699 m, 23.VIII.2011, ♀, Kandilli, 1754 m, 19.VI.2012, ♀, 1710 m, 21.VI.2011, ♀, Kopdağı, 2380 m, 5.IX.2012, ♀, Küçükgeçit, 1709 m, 23.VIII.2011, ♂, Aziziye, Gelinkaya, 1796 m, 24.VI.2012, ♀, Tebricik, 1750 m, 5.VIII.2012, ♂, Toprakkale, 2151 m, 22.VI.2011, ♂, Çat, 1913 m, 23.VII.2011, ♀, Güzelyurt, 2099 m, 5.VIII.2011, ♀, Yarmak, 1876 m, 11.VIII.2012, ♀, ♂, Horasan, Akçataş, 1659 m, 13.VIII.2012, 2♂♂, Değirmenli, 1643 m, 13.VIII.2011, ♂, Dönertaş, 1907 m, 13.VIII.2012, 2♀♀, Kırkgözeler, 1584 m, 13.VIII.2011, ♀, Yeşildere, 1698 m, 22.VI.2012, ♀, 1648 m, 28.VIII.2011, ♀, İspir, Çayırözü, 1947 m, 4.VIII.2012, ♀, Elmalı, 1328 m, 20.VII.2011, ♂, Madenköprübaşı, 1245 m, 4.VIII.2012, ♀, 1307 m, 20.VIII.2011, ♂, Yukarı Özbağ, 1190 m, 20.VII.2011, 2♂♂, Karaçoban, Duman, 1560 m, 26.VI.2011, ♀, Maruf, 1550 m, 26.VI.2011, ♀, Karayazı, Çatalören, 2313 m, 16.VIII.2011, ♀, Köprüköy, Marifet, 1685 m, 26.X.2011, ♂, Pekecik, 1722 m, 26.VI.2011, ♂, Narman, Göllü, 1842 m, 30.VI.2012, ♀ Yanıktaş, 1628 m, 30.VII.2011, ♀, Oltu, Başbağlar, 1925 m, 13.VIII.2011, ♂, Çamlıbel, 1775 m, 13.VII.2011, ♂, İğdeli, 1660 m, 30.VI.2012, ♂, Sarısaz, 1421 m, 30.VIII.2012, ♀, ♂, Toklu, 1300 m, 10.VI.2012, ♂, Olur, Coşkunlar, 1054 m, 10.VI.2012, ♂, Yeşilbağlar, 987 m, 10.VIII.2011, ♂, Pasinler, Acı, 1905 m, 22.VII.2012, ♀, Kurbançayırı, 1762 m, 12.VII.2012, ♂, Ovaköy, 1803 m, 30.VII.2011, ♀, 1785 m, 12.VIII.2012, ♀, Pazaryolu, 1430 m, 4.VIII.2012, 2♀♀, 1445 m, 20.VIII.2011, ♀, 1450 m, 24.VIII.2011, ♀, Şenkaya, Hoş, 1193 m, 10.VI.2012, ♀, Gözebaşı, 1794 m, 14.VII.2012, ♀, ♂, İkizpınar, 1589 m, 31.VIII.2011, ♀, Paşalı, 1106 m, 10.VIII.2011, ♂, Taht, 1283 m, 31.VIII.2011, 2♀♀, Tekman, Çiçekdağı, 1846 m, 26.VI.2011, ♀, Tortum, Aksukapı, 1648 m, 7.VIII.2011, ♀, Arılı, 1728 m, 15.VIII.2012, ♀, 3♂♂, Derekapı, 1247 m, 13.VIII.2011, ♀, ♂, Suyatağı, 1245 m, 27.V.2011, ♀, ♂, 1660 m, 31.VII.2011, ♀, Senyurt, 1265 m, 21.VII.2012, ♀, ♂, Yukarı Sivri, 1962 m, 16.VII.2012, ♀, ♂, Uzundere, Altınçanak, 967 m, 09.VIII.2011, ♀, 1048 m, 09.VII.2011, ♀, Çağlayanlı, 967 m, 27.V.2011, 2♀♀, ♂, Çamlıyamaç, 1282 m, 14.VIII.2012, ♀, Dikyar, 1133 m, 14.VIII.2012, 2♂♂, Gölbaşı, 1260 m, 7.VIII.2011, ♂, Kirazlı, 1203 m, 9.VIII.2011, ♂, Şelale, 985 m, 27.V.2011, ♂, 1012 m, 27.V.2011, 2♂♂; **İstanbul:** Kemerburgaz, 145 m, 31.VII.2011, ♂; **Mersin:** Erdemli, Üçtepe, 120 m, 17.IX.2012, ♂ 25.IX.2012, ♀.

### *Liorhyssus hyalinus* (FABRICIUS 1794)

**Material examined:** **Erzincan:** 850 m, 15.VII.2012, ♂; **Erzurum:** Karagöbek, 2033 m, 7.VI.2012, ♀, Palandöken, 2155 m, 22.VII.2012, ♀, Üniöersity field, 1850 m, 21.IX.2012, ♂, Aşkale, Çayköy, 1876 m, 23.VII.2011, ♀, ♂, Kandilli, Atıkonak, 1760 m, 9.VIII.2011, ♂, Aziziye, Gelinkaya, 1796 m, 24.VI.2012, ♀, Rizekent, 2088 m, 24.VI.2012, ♂, Tebricik, 1750 m, 5.VII.2012, 2♂♂, Çat, 1913 m, 23.VII.2011, ♀, 2♂♂, Güzelyurt, 2099 m, 5.VIII.2011, ♂, Köşeler, 1942 m, 18.VI.2012, ♂, Yukarıçat, 2162 m, 23.VII.2011, ♂, Dadaşkøy, 1806 m, 4.VIII.2011, ♀, Horasan, Çayırözü, 1799 m, 22.VI.2012, ♀, Dalbaşı, 1601 m, 17.VII.2011, ♀, Değirmenli, 1643 m, 13.VIII.2011, ♂, Dönertaş, 1907 m, 13.VIII.2012, 2♀♀, Kırkdikme, 1561 m, 13.VIII.2011, ♂, Kırkgözeler, 1584 m, 13.VIII.2011, ♂, Muratbağı, 1850 m, 21.VIII.2011, ♀, Yeşildere, 1684 m, 28.VIII.2011, 2♀♀, İspir, Elmalı, 1328 m, 20.VII.2011, ♀, Madenköprübaşı, 1307 m, 20.VII.2011, ♂, Yukarıözbağ, 1190 m, 20.VII.2011, ♀, Zeyrek, 2073 m, 22.VI.2011, ♀, ♂, Köprüköy, 1621 m, 13.VII.2011, ♀, ♂, Ataköy, 1788 m, 17.VI.2012, ♀, Eğirmez, 1670 m, 13.VIII.2011, ♀, Eyüpler, 1745 m, 16.VI.2012, ♀, 2♂♂, Narman, Ünlükaya, 1700 m, 8.VI.2012, ♀, Yanıktaş, 1628 m, 30.VII.2011, ♀, Oltu, Çamlıbel, 1775 m, 10.VI.2012, 2♀♀, 1661 m, 30.VI.2012, ♀, Orcuk, 1556 m, 10.VI.2012, ♀, ♂, Sarısaz, 1388 m, 5.VIII.2012, 2♀♀, 1421 m,



30.VIII.2012, ♀, ♂, Yayla, 2005 m, 10.VI.2012, 2♂♂, Olur, Ormanağzı, 955 m, 10.VII.2011, ♂, Pasinler, Büyükdere, 1759 m, 12.VIII.2012, 2♀♀, Espence, 1666 m, 21.VIII.2011, ♀, ♂, Kurbançayırı, 1762 m, 12.VIII.2012, ♂, Pazaryolu, 1430 m, 4.VIII.2012, ♂, Gülçimen, 1663 m, 20.VII.2011, ♀, Şenkaya, Hoş, 1193 m, 31.VII.2011, ♀, ♂, İkizpınar, 1589 m, 31.VII.2011, ♂, Taht, 1283 m, 10.VI.2012, ♀, Tekman, Çiçekdağı, 1846 m, 26.VI.2011, ♀, Körsu, 1901 m, 16.VII.2011, 2♀♀, Tortum, Aksukapı, 1648 m, 7.VII.2011, ♂, Arılı, 1728 m, 30.VIII.2012, 3♂♂, Derekapı, 1247 m, 9.VII.2011, ♀, Uzundere, Altınçanak, 1048 m, 9.VII.2011, ♀, Çamlıyamaç, 1290 m, 7.VIII.2011, ♂, Gölbaşı, 1260 m, 7.VII.2011, ♀, 1150 m, 14.VIII.2012, ♂; Samsun: Havza, Kamlik köyü, 500 m, 27.VIII.2011, ♀; Tunceli: Mazgirt, Kalaycı, 950 m, 20.VII.2011, ♀.

### ***Maccevethus caucasicus* (KOLENATI 1845)**

**Material examined:** Erzurum: Aşkale, Demirkıran, 1699 m, 11.VIII.2012, ♂, İspir, Yeşilvadi, 2285 m, 24.VI.2012, ♀, Karaçoban, Duman, 1560 m, 26.VI.2011, ♂, Köprüköy, Marifet, 1685 m, 16.VI.2012, ♀, ♂, Pekecik, 1722 m, 26.VI.2011, ♀, Oltu, İğdeli, 1660 m, 30.VI.2012, 2♀♀, Özdere, 1927 m, 16.VII.2012, ♀, Yolboyu, 1135 m, 10.VI.2012, ♀, Olur, Coşkunlar, 1054 m, 10.VI.2012, ♀, ♂, Olurdere, 1050 m, 10.VI.2012, ♂, Şenkaya, Hoş, 1193 m, 31.VII.2011, ♀, Uzundere, Çağlayanlı, 967 m, 27.V.2011, ♂.

### ***Maccevethus corsicus* SIGNORET 1862**

**Material examined:** Çanakkale: Biga, Bozlar, 20 m, 2.IX.2011, ♂; Erzurum: Narman, Kilimli, 1716 m, 13.VIII.2012, ♂, Oltu, İğdeli, 1660 m, 30.VI.2012, ♀, Yolboyu, 1135 m, 10.VI.2012, ♀, Pazaryolu, Esenyurt, 1400 m, 4.VIII.2012, ♂, Şenkaya, Taht, 1283 m, 10.VI.2012, ♂.

### ***Rhopalus (Aeschyntelus) maculatus* (FIEBER 1837)**

**Material examined:** Erzurum: İspir, Özlüce, 1736 m, 4.VIII.2012, 4♀♀, 2♂♂, Pazaryolu, 1495, 24.VII.2011, ♂, Tortum, 1661 m, 23.VI.2011, ♂.

### ***Rhopalus (Rhopalus) conspersus* (FIEBER 1837)**

**Material examined:** Erzurum: Horasan, Dalbaşı, 1577 m, 22.VI.2012, ♀, Tortum, Derekapı, 1010 m, 7.VI.2012, ♀.

### ***Rhopalus (Rhopalus) parumpunctatus* SCHILLING 1829**

**Material examined:** Erzurum: Aşkale, Küçükgeçit, 1709 m, 23.VII.2011, ♂, Horasan, Dönertaş, 1907 m, 13.VII.2012, ♀, Pazaryolu, 1430 m, 4.VIII.2012, 2♀♀, Şenkaya, İkizpınar, 1589 m, 31.VII.2011, ♀.

### ***Rhopalus (Rhopalus) subrufus* (GMELIN 1790)**

**Material examined:** Erzurum: Çat, Bayındır, 1978 m, 18.VI.2012, ♀, Karayazı, Alemdağı, 2022 m, 16.VII.2011, ♂, Narman, Kilimli, 1726 m, 16.VII.2012, ♂, Oltu, Çamlıbel, 1775 m, 10.VI.2012, ♂, 1682 m, 31.VII.2011, ♂, Sarısaz, 1421 m, 30.VIII.2012, ♀, Tutmaç, 1720 m, 16.VII.2012, 2♀♀, Olur, Süngübayır, 1650 m, 10.VI.2012, ♂, Şenkaya, Gözebaşı, 1794 m, 14.VII.2012, ♂, Hoş, 1193 m, 10.VI.2012, ♂, Tortum, Pehlivanlı, 1179 m, 14.VIII.2012, ♀, Suyatağı, 1245 m, 27.V.2011, ♂, 1236 m, 21.VII.2012, ♀, Uzundere, Altınçanak, 1132 m, 21.VII.2012, ♀, Gölbaşı, 1260 m, 7.VIII.2011, Kirazlı, 1203 m, 9.VII.2011, ♂.

### ***Stictopleurus abutilon* (ROSSI 1790)**

**Material examined:** Erzurum: Abdurrahmangazi, 2170 m, 22.VII.2012, ♀, Karagöbek, 2033 m, 7.VI.2012, ♀, Palandöken, 2155 m, 22.VII.2012, ♂, Aşkale, Kopdağı, 2380 m, 5.IX.2012, ♀, Aziziye, Rizekent, 2088 m, 24.VI.2012, ♀, Çat, Başköy, 2129 m, 18.VII.2012, ♀, Çirişli, 2198 m, 18.VI.2012, ♀, Güzeyurt, 2117 m, 9.VIII.2011, ♀, Tuzlaköy, 1926 m, 21.VI.2011, ♂, Horasan, Çayırüzü, 1799 m, 22.VI.2012, ♀, Dalbaşı, 1577 m, 22.VI.2012, ♀,

Yukarı Horon, 1957 m, 14.VII.2012, ♂, Köprüköy, Eyüpler, 1745 m, 16.VI.2012, ♂, Marifet, 1685 m, 16.VII.2012, ♀, Narman, Demirdağ, 2028 m, 16.VII.2012, ♀, Şehitler, 1850 m, 8.VI.2012, 2♀♀, Oltu, Başbağlar, 1925 m, 13.VII.2011, ♂, Çamlıbel, 1661 m, 30.VI.2012, ♀, İğdeli, 1660 m, 30.VI.2012, ♀, İnancı, 1812 m, 31.VII.2011, ♀, Orcuk, 1556 m, 10.VI.2012, ♀, Yayla, 2005 m, 10.VI.2012, ♀, Olur, Boğazgören, 1168 m, 19.VII.2012, ♀, Coşkunlar, 1054 m, 30.VII.2011, ♀, Yeşilbağlar, 987 m, 10.VII.2011, 2♂♂, Pasinler, Yiğitpınarı, 1815 m, 22.VII.2012, ♂, Pazaryolu, 1430 m, 4.VIII.2012, 2♀♀, Şenkaya, İçmesu, 1656 m, 14.VII.2012, ♀, Taht, 1283 m, 31.VII.2011, ♀, Tekman, Körsu, 1984 m, 26.VI.2011, ♀, ♂, Tortum, 1660 m, 31.VII.2011, ♂, Pehlivanlı, 1158 m, 21.VII.2012, ♀, 1179 m, 14.VIII.2012, ♂, Uzundere, Çağlayanlı, 967 m, 27.V.2011, ♀.

### *Stictopleurus punctatonervosus* (GOEZE 1778)

**Material examined:** Ardahan: Çıldır, Kotanlı, 1690 m, 2.IX.2012, ♀; Bayburt: Kopdağı, 2380 m, 5.IX.2012, 2♀♀; Erzurum: Dadaşköy, 1806 m, 4.VIII.2011, ♀, Karagöbek, 1961 m, 16.VII.2012, ♀, Palandöken, 2155 m, 22.VII.2012, 2♀♀, 2♂♂, University field, 1850 m, 21.IX.2012, ♂, Aşkale, 1661 m, 19.VI.2012, ♀, ♂, Büyükgeçit, 1730 m, 18.VII.2012, ♀, Çayköy, 1700 m, 19.VI.2012, ♂, 1876 m, 23.VII.2011, ♂, Gölçebük, 1699 m, 23.VII.2011, ♂, Kopdağı, 2380 m, 5.IX.2012, 2♀♀, 2♂♂, Tepsicik, 2300 m, 5.VII.2012, ♂, Yeniköy, 1905 m, 19.VI.2012, ♂, Aziziye, Gelinkaya, 1796 m, 24.VI.2012, ♀, ♂, Ortabahçe, 1763 m, 5.VII.2012, 2♂♂, Toprakkale, 2151 m, 22.VI.2011, 2♂♂, Çat, Bayındır, 1978 m, 18.VI.2012, ♂, Çirışli, 2198 m, 18.VI.2012, ♂, Yukarı Çat, 1904 m, 18.VI.2012, ♂, Hınıs, Akören, 1828 m, 16.VII.2011, ♂, Yöğür, 1664 m, 17.VI.2012, ♂, Horasan, Akçataş, 1659 m, 13.VIII.2012, ♂, Aşağı Çamlıkale, 2242 m, 13.VIII.2012, ♀, Dalbaşı, 1601 m, 17.VII.2011, 2♀♀, Değirmenli, 1608 m, 22.VI.2012, ♀, Hacıahmet, 1823 m, 13.VIII.2012, ♀, 2♂♂, Muratbağı, 1859 m, 21.VIII.2011, ♀, Tavşancık, 1518 m, 17.VII.2011, ♂, Yeşildere, 1698 m, 22.VI.2012, ♂, İspir, Aşağı Özbâğ, 1177 m, 15.VII.2012, ♀, ♂, Güneyköy, 2024 m, 24.VII.2011, ♂, Kirazlı, 1207 m, 24.VII.2011, ♀, Madenköprübaşı, 1744 m, 24.VI.2012, ♀, Yeşilvadi, 2285 m, 24.VI.2012, ♀, Yukarı Özbâğ, 1190 m, 20.VII.2011, ♀, Karayazı, Çatalören, 2313 m, 16.VI.2012, ♀, ♂, Köprüköy, 1135 m, 24.VII.2011, ♀, Eyüpler, 1745 m, 16.VI.2012, ♀, Marifet, 1685 m, 16.VI.2012, 2♂♂, Narman, Demirdağ, 2028 m, 16.VII.2012, ♀, ♂, Göllü, 1842 m, 30.VI.2012, ♀, Şehitler, 1850 m, 8.VI.2012, 2♀♀, Yanıktaş, 1628 m, 30.VII.2011, ♀, Oltu, Çamlıbel, 1775 m, 10.VI.2012, ♂, İnancı, 1812 m, 31.VII.2011, 2♀♀, Orcuk, 1556 m, 10.VI.2012, ♂, Tekeli, 1320 m, 10.VI.2012, ♀, Toklu, 1300 m, 10.VI.2012, ♀, Tuzlaköy, 1109 m, 30.VII.2011, ♀, Tutlu, 1240 m, 23.VI.2011, ♀, Olur, Coşkunlar, 1054 m, 10.VI.2012, ♀, 30.VII.2011, ♀, Olgun, 1600 m, 10.VI.2012, ♀, ♂, Ormanağzı, 951 m, 6.VII.2012, ♀, ♂, 955 m, 10.VII.2011, ♂, 935 m, 5.VIII.2012, 2♂♂, Taşlıköy, 860 m, 10.VII.2011, ♂, Yeşilbağlar, 987 m, 10.VII.2011, ♀, Pasinler, Büyükdere, 12.VIII.2012, ♀, Ovaköy, 1803 m, 30.VII.2011, ♀, Pazaryolu, 1430 m, 24.VI.2012, ♂, 1452 m, 15.VII.2012, ♂, 4.VIII.2012, ♀, ♂, Kümbettepe, 1427 m, 24.VII.2011, ♀, Şenkaya, Hoş, 1193 m, 10.VI.2012, ♀, 31.VII.2011, ♀, İçmesu, 1656 m, 14.VII.2012, ♂, İkizpınar, 1589 m, 31.VII.2011, 2♀♀, ♂, Taht, 1283 m, 31.VII.2011, ♂, Tortum, 1661 m, 23.VI.2011, 2♀♀, Aksukapı, 1648 m, 10.VI.2012, 2♀♀, ♂, Arılı, 1650 m, 15.VIII.2012, ♀, Aşağı Sivri, 1546 m, 16.VII.2012, ♂, Pehlivanlı, 1158 m, 21.VII.2012, ♂, Suyatağı, 1245 m, 27.V.2011, ♂, 1236 m, 21.VII.2012, ♀, ♂, Şenyurt, 1265 m, 21.VII.2012, ♀, ♂, Taşbaşı, 1816 m, 9.VII.2011, 2♀♀, Yukarı Sivri, 1909 m, 16.VII.2012, ♂, 1962 m, 16.VII.2012, ♂, Uzundere, Altınçanak, 1048 m, 9.VII.2011, ♀, ♂, Çağlayanlı, 967 m, 27.V.2011, ♀, Dikyar, 1133 m, 14.VIII.2012, ♀, Gölbaşı, 1260 m, 7.VIII.2011, ♀, 1150 m, 14.VIII.2012, ♀, ♂, Kirazlı, 1203 m, 9.VII.2011, ♀, 1231 m, 21.VII.2012, ♀, Sapaca, 1082 m, 21.VII.2012, ♂.

### *Stictopleurus subtomentosus* (REY 1888)

**Material examined:** Erzurum: Köprüköy, Kepecik, 1722 m, 26.VI.2011, ♂, Tortum, Arılı, 1728 m, 30.VIII.2012, ♀, Uzundere, Çağlayanlı, 967 m, 27.V.2011, ♀.

### *Stictopleurus unicolor* (JAKOVLEV 1873)

**Material examined:** Erzurum: Aşkale Yeniköy, 1905 m, 19.VI.2012, ♀.

## Family *Stenocephalidae*

### *Dicranocephalus agilis* (SCOPOLI 1763)

**Material examined:** Ankara: Kalecik, Emeklikent, 725 m, 1.IX.2011, ♂; Erzincan: Kemah, 5.VIII.2011, ♂, 2♀; Erzurum: 1650 m, 3.IX.2011, ♀; İspir, Kirazlı, 1206 m, 20.VII.2011, ♂, Yeşilvadi, 2285 m, 24.VI.2012, ♀, Köprüköy, 1135 m, 24.VII.2011, ♂, ♀, Güzelhisar, 1955 m, 16.VI.2012, ♀, Oltu, Duralar, 1421 m, 30.VII.2011, 2♂♂, Tuzlaköy, 1109 m, 30.VII.2011, ♀, ♂, Olur, Coşkunlar, 1054 m, 30.VII.2011, ♀, Taşlıköy, 860 m, 10.VII.2011, ♀, Pazaryolu, 1495 m, 24.VII.2011, ♂, Şenkaya, İkizpınar, 1589 m, 31.VII.2011, ♂, Paşalı, 1106 m, 10.VII.2011, 2♀♀, Penek, 1145 m, 10.VII.2011, ♂, Taht, 1283 m, 31.VII.2011, 2♀♀, Tortum, Derekapı, 1247 m, 9.VII.2011, 2♂♂, Uzundere, 1147 m, 7.VIII.2011, ♂, Çağlayanlı, 967 m, 27.V.2011, ♂, Çamlıyamaç, 1290 m, 7.VIII.2011, ♀, Gümüşhane: Köse, Akbaba, 1710 m, 3.IX.2011, ♀; Isparta: Ayazmana, 1100 m, 30.VII.2011, ♂; İstanbul: Kemerburgaz, 145 m, 31.VII.2011, ♂; Samsun: Havza, Kamlık, 500 m, 3.IX.2011, ♀; Tunceli: Pülümür, Sağlamtaş, 1701m, 13.VIII.2011, ♀.

### *Dicranocephalus albipes* (FABRICIUS 1781)

**Material examined:** Erzurum: Aziziye, Alaca, 1751 m, 5.VI.2012, ♀, Horasan, Muratbağı, 1852 m, 22.VI.2012, ♂, İspir, Öztoprak, 1724 m, 15.VII.2012, ♂, Yukarı Özbağ, 1190 m, 20.VII.2011, 2♀♀, Köprüköy, Ilcasu, 2111 m, 30.VII.2011, ♂, Narman, Göllü, 1842 m, 30.VI.2012, ♂, 1083 m, 30.VII.2011, ♂, Samikale, 1541 m, 30.VII.2011, ♀, Ünlükaya, 1700 m, 8.VI.2012, ♀, 2♂♂, Oltu, Çamlıbel, 1661 m, 30.VI.2012, ♀, ♂, Demirtaş, 1888 m, 6.VII.2012, ♀, 2♂♂, İğdeli, 1660 m, 30.VI.2012, ♀, Olur, Süngübayır, 1650 m, 10.VI.2012, ♀, ♂, Tortum, 1533 m, 7.VI.2012, 2♀♀, ♂, Aksukapı, 1650 m, 10.VI.2012, ♀, 1648 m, 7.VII.2011, ♂, Çamlıca, 1674 m, 16.VII.2012, ♂, Derekapı, 1247 m, 13.VII.2011, ♂.

## Superfamily *Piesmatoidea*

### Family *Piesmatidae*

#### *Piesma maculatum* (LAPORTE 1833)

**Material examined:** Erzurum: Narman, 1550 m, 25.V.1989, 2♀♀, 12.VI.1988, 3♀♀, 29.VI.1988, 3♀♀, 3♂♂, 30.VI.1989, 3♀♀, 2♂♂, 8.VII.1988, 11.VII.1989, ♂, 12.VII.1988, 4♀♀, 6♂♂, 29.VII.1988, 2♂♂, 30.VII.1989, ♀, Kışlaköy, 1892 m, 13.VIII.2012, ♂, Ünlükaya, 1700 m, 8.VI.2012, ♀, Oltu, 1300 m, 25.V.1989, 6♀♀, 7♂♂, 1.VI.1989, 3♀♀, 2.VI.1989, 2♂♂, 3.VI.1988, 2♀♀, 2♂♂, 7.VI.1989, 3♀♀, 2♂♂, 8.VI.1988, 4♀♀, 2♂♂, 9.VI.1988, 2♂♂, 11.VI.1988, 3♀♀, 3♂♂, 12.VI.1988, ♀, 16.VI.1989, 8♀♀, 4♂♂, 17.VI.1989, 3♀♀, 3♂♂, 18.VI.1988, 3♀♀, 4♂♂, 20.VI.1989, ♀, 23.VI.1988, 4♀♀, 4♂♂, 25.VI.1989, 2♀♀, 2♂♂, 28.VI.1988, 6♀♀, 2♂♂, 30.VI.1988, 3♀♀, 30.VI.1989, 11♀♀, 2♂♂, 31.VI.1988, 2♂♂, 2.VII.1989, 3♀♀, 7.VII.1989, 3♀♀, 3♂♂, 8.VII.1988, 3♀♀, 10.VII.1989, 3♀♀, 2♂♂, 10.VII.1990, 2♀♀, 11.VII.1988, 3♀♀, 5♂♂, 12.VII.1988, 3♀♀, 16.VII.1989, 6♀♀, 4♂♂, 18.VII.1988, 3♀♀, 5♂♂, 20.VII.1988, 2♀♀, 2♂♂, 20.VII.1989, ♀, 21.VII.1988, 2♀♀, 2♂♂, 24.VII.1989, 6♀♀, 5♂♂, 28.VII.1988, 2♂♂, 30.VII.1989, 3♀♀, 31.VII.1988, 3♀♀, 4♂♂, 1.VIII.1989, 5♀♀, 4♂♂, 4.VIII.1990, 3♀♀, ♂, 5.VIII.1988, 2♀♀, 2♂♂, 6.VIII.1989, 2♀♀, 7.VIII.1989, ♀, 10.VIII.1989, 7♀♀, 2♂♂, 10.VIII.1978, 4♀♀, 3♂♂, 11.VIII.1988, 2♀♀, 3♂♂, 12.VIII.1989, 9♀♀, 7♂♂, 16.VIII.1989, 18♀♀, 14♂♂, 18.VIII.1988, 3♀♀, 20.VIII.1989, 2♀♀, ♂, 21.VIII.1988, 2♀♀, 2♂♂, 24.VIII.1989, 2♂♂, 28.VIII.1988, 2♀♀, 2♂♂, 2.IX.1988, 1♀♀, 9♂♂, Şenkaya, 1900 m, 2.VI.1989, 3♀♀, 9.VI.1988, 2♂♂, 16.VI.1988, ♀, 17.VI.1989, 6♀♀, 4♂♂, 20.VI.1989, 3♀♀, ♂, 21.VI.1989, ♂, 30.VI.1989, ♂, 1.VII.1989, 2♀♀, 8.VII.1988, 2♀♀, 2♂♂, 10.VII.1989, 15♀♀, 13♂♂, 19.VII.1988, 2♀♀, 2♂♂, 31.VII.1988, 3♀♀, 4♂♂, 5.VIII.1989, 4♀♀, 7♂♂, 6.VIII.1990, 3♀♀, 10.VIII.1989, 3♀♀, 2♂♂, Turnalı, 1850 m, 10.VII.1989, 5♀♀, 4♂♂, 6.VIII.1990, 7♀♀, 6♂♂.

***Parapiesma atriplicis* (FREY-GESSNER 1863)**

Material examined: Erzurum: 1850 m, 28.V.1980, ♀, ♂, University field, 1850 m, 7.VI.1996, ♂, Narman, Kışlaköy, 1892 m, 13.VIII.2012, 12 ♀, 5 ♂, Oltu, 4.VIII.2009, 7 ♀, ♂, Şenkaya, 1900 m, 16.VI.1988, ♂; Kars: Sankamış, Karakurt, 1500 m, 13.VII.2009, 3 ♀.

***Parapiesma salsolae* (BECKER 1867)**

Material examined: Erzincan: Mercan, 11.VII.1990, ♀, 3 ♂; Erzurum: Narman, 1550 m, 11.VII.1990, ♀, Oltu, Yolboyu, 1135 m, 31.VII.2010, 2 ♀.

**Infraorder Leptopodomorpha****Superfamily Saldoidae****Family Saldidae****Subfamily Saldinae****Tribe Saldoidini*****Saldula amplicollis* (REUTER 1891)**

Material examined: Erzurum: Aziziye, Yoncalık, 1900 m, 4.VIII.2009, ♀.

***Saldula arenicola* (SCHOLTZ 1847)**

Material examined: Erzincan: Geyikli, 11.VI.2010, ♀, 5 ♂; Erzurum: Şenkaya, Sındıran, 1491 m, 31.VII.2011, ♀.

***Saldula pallipes* (FABRICIUS 1794)**

Material examined: Erzurum: University field, 1850 m, 13.VIII.1988, ♀, Aşkale, 31.VII.1989, ♀, Pasinler, 1600 m, 14.VI.2009, ♂; Erzincan: Üzümlü, 1500 m, 22.IX.2009, ♀.

**Infraorder Nepomorpha****Superfamily Corixoidae****Family Corixidae****Subfamily Corixinae****Tribe Corixini*****Corixa affinis* LEACH 1817**

Material examined: Karaman: Sudağı, 13.VIII.1994, 3 ♀.

***Corixa panzeri* FIEBER 1848**

Material examined : Erzurum: University field, 1850 m, 7.VIII.1996, ♀.

***Corixa punctata* (ILLIGER 1807)**

Material examined : Ankara: Kızılçahamam, Işık Mountain, 1650 m, 18.IX.2011, ♀,  
Sipahiler, 975 m, 27.VI.2011, ♂.

***Sigara (Pseudovermicorixa) nigrolineata* (FIEBER 1848)**

Material examined : Erzurum: University field, 1850 m, 1.VIII.1998, ♂.

***Sigara (Vermicorixa) lateralis* (LEACH 1817)**

Material examined : Erzurum: University field, 1850 m, 14.VII.1996, ♂, 15.VII.1996,  
♂, 1.VIII.1998, ♂, 7.VIII.1996, ♀.

**Superfamily Nepoidea**

**Family Belostomatidae**

**Subfamily Lethocerinae**

***Lethocerus (Lethocerus) patruelis* (STÅL 1854)**

Material examined : Adana: 28.VII.1992, ♀; Bahkesir: İvrindi, Korucu, 26.VI.2010, ♂;  
Bursa: Karacabey, 145 m, 24.VII.2009, ♂; Çanakkale: Biga, Bozlar, 20 m, 6.IX.2011, 2♂♂;  
Hatay: Erzincan, 21.IX.2002, ♀, ♂.

**Family Nepidae**

**Subfamily Nepinae**

**Tribe Nepini**

***Nepa cinerea* LINNAEUS 1758**

Material examined : Sivas: 7.IX.1992, 2♀♀.

**Superfamily Notonectoidea**

**Family Notonectidae**

**Subfamily Notonectinae**

**Tribe Notonectini**

***Notonecta maculata* FABRICIUS 1794**

**Material examined:** Antalya: Akseki, 30.VII.1993, 12 ♀ ♀, 8 ♂ ♂; Mersin: Silifke, 20.IX.1993, ♂; Sanlıurfa: Viranşehir, Büyükgörmülü, 563 m, 8.VIII.2012, 2 ♀ ♀, ♂.

***Notonecta glauca* LINNAEUS 1758**

**Material examined:** Ankara: Kızılcahamam, Sipahiler, 975 m, 27.VI.2011, ♀, 14.VIII.2011, 2 ♀ ♀; Sanlıurfa: Viranşehir, Büyükgörmülü, 563 m, 8.VIII.2012, ♀.

***Notonecta meridionalis* POISSON 1926**

**Material examined:** Ankara: Sereflikoçhisar, Kuşçular, 20.VII.2008, ♀; Erzurum: Oltu, Çamlıbel, 1750 m, 12.VIII.1998, ♀; Konya: Güneysınır, Gürağaç, 1017 m, 6.VI.1989, 2 ♀ ♀, ♂.

**Discussion**

In this study, 4 species of 2 genera from Gerridae, 3 species of 2 genera from Alydidae, 14 species of 11 genera from Coreidae, 15 species of 8 genera from Rhopalidae, 2 species of 1 genus from Stenocephalidae, 3 species of 2 genera from Piesmatidae, 3 species of 1 genus from Saldidae, 5 species of 2 genera from Corixidae, 1 species of 1 genus from Belostomatidae, 1 species of 1 genus from Nepidae and 3 species of 1 genus from Notonectidae were recorded. In total, 54 species from 32 genera of these families were recorded from Turkey. Among them, *Camptopus lateralis* (GERMAR 1817) (Alydidae), *Coreus marginatus* (LINNAEUS 1758) (Coreidae), *Corizus hyoscyami* (LINNAEUS 1758), *Stictopleurus punctatonervosus* (GOEZE 1778) (Rhopalidae), *Dicranocephalus agilis* (SCOPOLI 1763) (Stenocephalidae) and *Piesma maculatum* (LAPORTE 1833) (Piesmatidae) have been found the most abundant and widespread species. In addition, new localities are added for some species previously reported for Turkey.

Regular collections of bugs between 1978 and 2012 in Turkey allowed the caught of a representative (though not complete) sample of the fauna of Heteroptera: 54 species from 32 genera belonging to families Gerridae, Alydidae, Coreidae, Rhopalidae, Stenocephalidae, Piesmatidae, Saldidae, Corixidae, Belostomatidae, Nepidae and Notonectidae. The majority of the species belong to mediterranean or euro siberian faunal kingdoms.

The collect data are interesting for national or regional distribution of species (many new localities added to known distribution) and they allowed the discovery. They also give indications on the biology of the species (dates of the 1<sup>st</sup> or the last caught); the altitude of collect station is greatly indicative too.

All these data contribute to a better knowledge of turkish fauna and, second, of the ecology of Heteroptera in the north east of mediterranean basin, particularly the least common of them.

**Zusammenfassung**

Vorliegende Studie basiert auf Aufsammlungen der Familien Gerridae, Alydidae, Coreidae, Rhopalidae, Stenocephalidae, Piesmatidae, Saldidae, Corixidae, Belostomatidae, Nepidae and

Notonectidae, die im Zeitraum 1978 bis 2012 an verschiedenen Lokalitäten der Türkei gesammelt wurden. Insgesamt konnten 54 Arten aus 32 Gattungen nachgewiesen werden. Zu den häufigsten und weitverbreitetsten Arten zählten *Coreus marginatus* (LINNAEUS 1758) (Coreidae), *Corizus hyoscyami* (LINNAEUS 1758), *Stictopleurus punctatovenosus* (GOEZE 1778) (Rhopalidae), *Dicranocephalus agilis* (SCOPOLI 1763) (Stenocephalidae) und *Piesma maculatum* (LAPORTE 1833) (Piesmatidae).

## References

- ANDERSEN N.M. (1982): The Semiaquatic bugs (Hemiptera, Gerromorpha): Phylogeny, Adaptations, Biogeography and Classification. — Entomograph **13**: 445 pp.
- AUKEMA B. & C. RIEGER (1995): Catalogue of the Heteroptera of the Palaearctic Region. Vol. 1: Enicocephalomorpha, Dipsocoromorpha, Nepomorpha, Gerromorpha and Leptopodomorpha. — The Netherlands Entomological Society ed., Wageningen.
- AUKEMA B. & C. RIEGER (2006): Catalogue of the Heteroptera of the Palaearctic Region. Vol. 5: Pentatomomorpha (2). — The Netherlands Entomological Society ed., Wageningen.
- HEISS E. & J. PÉRICART (2007): Hémiptères Aradidae, Piesmatidae et Dipsocoromorphes euro méditerranéens. — In: Faune de France, t. 91. — Fédération des Sociétés de sciences naturelles éd., Paris.
- JANSSON A. (1986): The Corixidae (Heteroptera) of Europe and some adjacent regions. — Acta Entomol. Fenn. **47**: 1-94.
- LETHIERRY L. & G. SEVERIN (1894): Catalogue Général des Hémiptères. Vol. II. Hétéroptères. — Bruxelles.
- MITCHELL P.L. (2000): Leaf-footed bugs (Coreidae). pp. 337-403. — In: SCHAEFER C.W. & A.C. PANIZZI (eds), Heteroptera of Economic Importance. CRC Press, Boca Raton.
- MOULET P. (1995): Hétéroptères Coreoidea euro-méditerranéens. — In: Faune de France, t. 81. Fédération des Sociétés de sciences naturelles éd., Paris.
- PERICART J. (1990): Hémiptères Saldidae et Leptodopidae d'Europe occidentale et du Maghreb. — In: Faune de France, t. 77. — Fédération des Sociétés de sciences naturelles éd., Paris.
- PUTON A. (1875): Catalogue des Hémiptères (Hétéroptères, Cicadines et Psyllides) d'Europe et du bassin de la Méditerranée. — 2<sup>nd</sup> edit, Paris.
- SCHAEFER C.W. (1965): The morphology and higher classification of the Coreoidea (Hemiptera, Heteroptera). Part II. The families Rhopalidae, Alydidae and Coreidae. — Misc. Publ. Entomol. Soc. of Amer. **5**: 1-76.
- SCHUH R.T. & J.A. SLATER (1995): True bugs of the world (Hemiptera: Heteroptera), classification and natural history. — Cornell University Press, London.
- STICHEL W. (1957-1959): Illustrierte Bestimmungstabellen des Wanzen. II. Europa. — Stichel éd., Berlin, [1957: 1-96; 1959, 225-384].
- YANG H., LI H., DAI X., CHANG J. & W.Z. CAI (2012): New cytogenetics data on Coreoidea (Hemiptera, Heteroptera) with special reference to Coreidae. — Zootaxa **3313**: 53-61.
- YILDIRIM E. & H. ÖZBEK (1990): Oltu (Erzurum) yöresinde şekerpancarı zararlısı *Piesma maculatum* LAPORTE (Heteroptera, Piesmidae)'un biyolojisi ve zararı üzerinde bazı çalışmalar. — Türk. Entomol. Derg. **14** (2): 97-108.
- YILDIRIM E., YAZICI G. & R. LINNAVUORI (2011): Contribution to the knowledge of Alydidae, Coreidae, Rhopalidae and Stenocephalidae (Coreoidea: Heteroptera: Hemiptera) fauna of Turkey. — Linzer biol. Beitr. **43** (2): 1625-1639.



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